

Notes on Microlepidoptera.

IV. Remarks on *Tinea insectella* (Fb.) Diak. and *Tinea ditella* Pierce et Diak.

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It is rather difficult to distinguish these two species with the aid of superficial characteristics only; the genitalia, however, are quite different in both sexes. When studying material from the Netherlands and from Austria, present in Dutch collections, I came to the following points of difference. This material was far from abundant, however, thus the future must prove, whether the following scheme is of value or not; I believe that superficial characteristics are insufficient for distinguishing these two species with certainty, without the study of the genital apparatus.

Tinea ditella.

Narrower, elongate-lanceolate.

Darker: ochreous.

Darker: brown or dark brown.

Two discal dots mostly distinct.

Apex gradually pointed, termen rounded, not concave.

Lighter grey, violet shine less conspicuous.

Tinea insectella.

Forewings: rather broad, lanceolate.

Groundcolour: light ochreous.

Markings: brownish.

One discal dot distinct.

Hindwings with apex shortly pointed, termen slightly concave beneath apex.

Groundcolour rather dark grey, with a bright violet shine.

Tinea insectella Fabr.

Tinea insectella Fabricius, Entomol. system. III (2), p. 303, No. 72, 1794.

Tinea misella Zeller, Isis, p. 184, No. 24, 1839.

Netherlands: Amsterdam; Overveen; Rotterdam; Arnhem; Leeuwen; Breda. 3.IV; 9, 10, 14, 17, 20, 30.VI; 15, 16, 17, 20, 29.VII; 3, 6, 23. VIII. 1870, '75, '78, '82, '83, '93, 1929, '30, '35. (Medembach de Rooy, Heylaerts, Snellen, Schuyt, Count Bentinck, Wijnbelt, the author). Austria: Graz, Styria, 1.VII.1907. 19 ♂, 14 ♀.

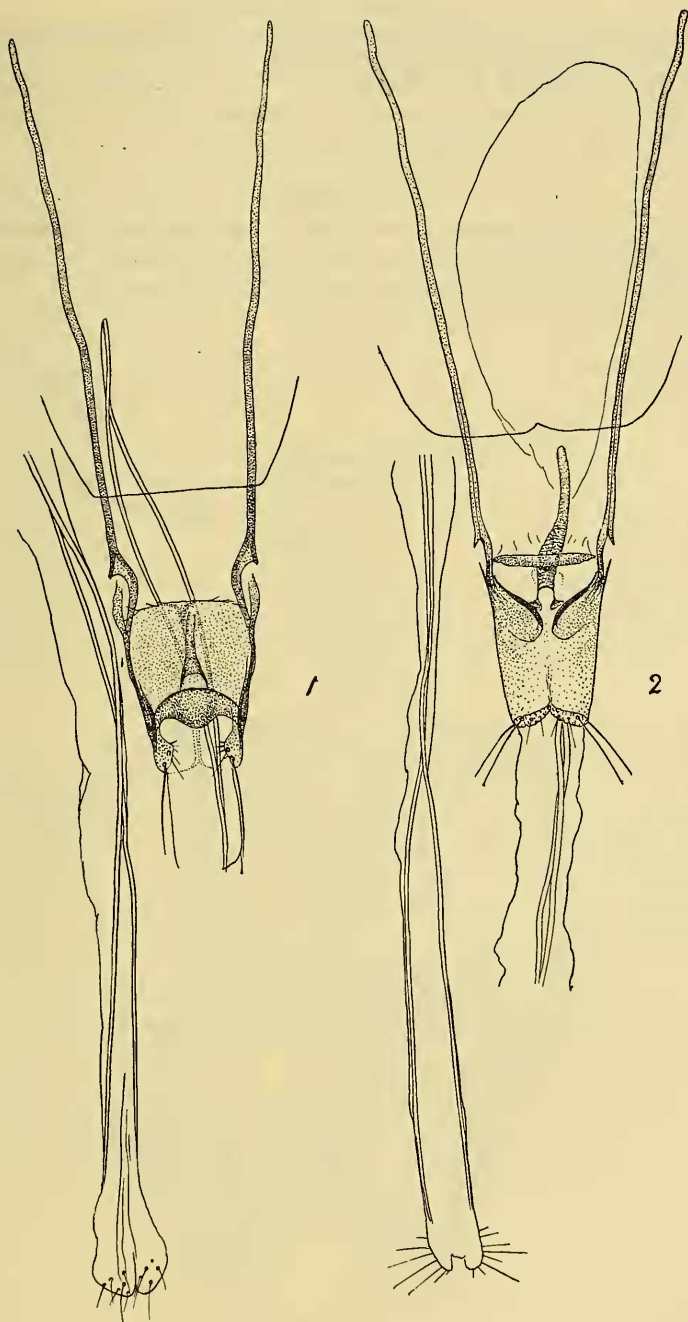


Fig. 1. Female genitalia of *Tinea insectella* Fb. Slide No. 103 D.
Fig. 2. Female genitalia of *Tinea ditella* Pierce et Diak. Slide No. 107 D.

Tinea ditella Pierce et Diak.

Tinea ditella Pierce et Diakonoff, in Pierce and Metcalfe, Genit. Brit. Pyrales, Deltoids and Plumes, p. 68, 1938.

Netherlands: Rotterdam. 1, 21.VI. 1861, '63, '97. (e larva, Snellen). Austria: Graz, Styria. 19, 24. VI. 1907, '09. Germany, Breslau. III (?). 1871. 5 ♂, 2 ♀.

Genitalia.

Only the genitalia of *insectella* ♂ and *ditella* ♀ have been figured as far. Figures of the ♀ and of *ditella* ♂ and ♀, preceded by short descriptions, are given below.

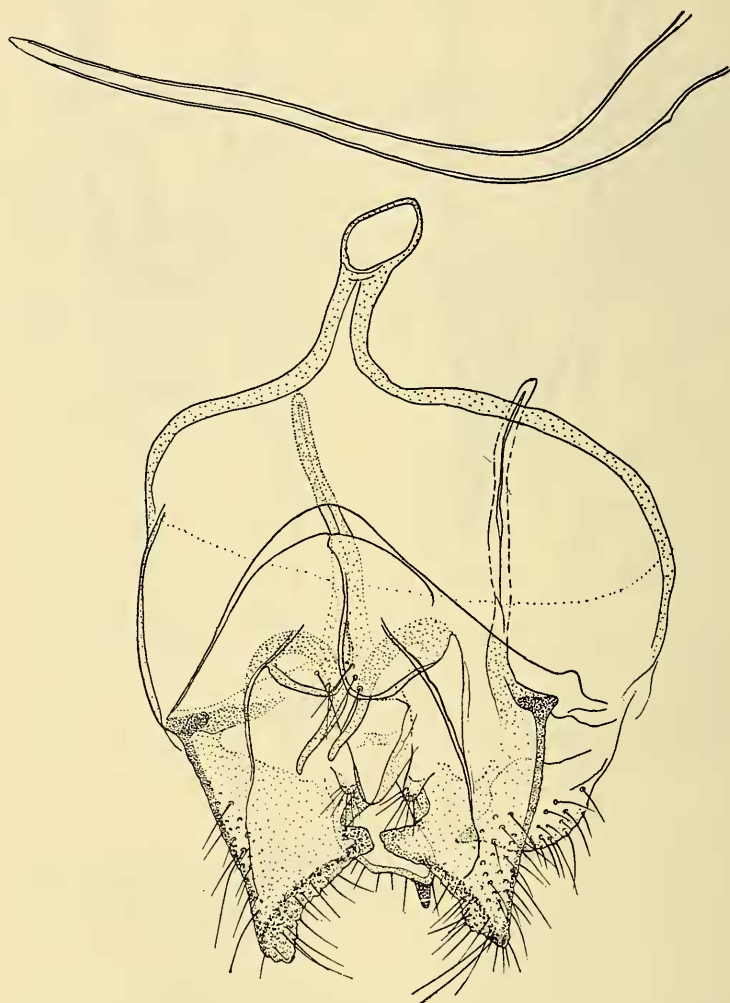


Fig. 3. Male genitalia of *Tinea ditella* Pierce et Diak. Slide No. 2 D.

Tinea insectella ♂.

Pierce and Metcalfe, The Genitalia of the British Tineina, p. 101, pl. 62, 1935; The Genitalia of the British Pyrales, Deltoids and Plumes, p. 68—69, 1938. Diakonoff, Tijdschr. v. Entom. vol. 81, p. 236, fig. 1—3, 1938.

Tinea insectella ♀, fig. 1.

Pierce and Metcalfe, The Genitalia of the British Pyrales, Deltoids and Plumes p. 69, 1938.

8th segment chitinised entirely, its terminal margin with a large ventral excavation, edged by two bristled lateral lobes and a dark, rounded ventral lobe; ostium small, rounded, cupshaped, supported by thinly chitinised 8th sternite; basal end of ductus bursae a chitinised funnel, its wall smooth; anapophyses with a sinuation at base, bearing a basal process and a triangular dilatation.

Tinea ditella ♂, fig. 3.

Pierce and Diakonoff in Pierce and Metcalfe, The Genitalia of the British Pyrales, Deltoids and Plumes p. 68, 1938.

Tegumen a broad ring, saccus a knob-shaped process; uncus bilobed with a dark tooth at the apex of each lobe; valva short, quadrate, thickened, verrucate and bristled along margin; costa with a long basal projection, sacculus indistinct; peniculi two small, bristled projections; furca two narrow projections; aedoeagus very long, acute, curved.

Tinea ditella ♀, fig. 2.

Pierce and Metcalfe, The Genitalia of the British Tineina, p. 101, pl. 62, 1935; Pierce and Diakonoff in Pierce and Metcalfe, The Genitalia of the British Pyrales, Deltoids and Plumes p. 68, 1938.

8th segment entirely chitinised, wrinkled and bristled along terminal margin and forming an ovate lobe at each side of the ostium; ostium small, rounded, with two chitinised pads at the sides; basal part of ductus bursae chitinised, funnel-shaped, widened a little below base, with wrinkled walls; a conspicuous transverse rod before ostium; anapophyses with a small basal sinuation, its projections short.

For certain identification of males it is sufficient to brush partially the hairs of the anal tuft away and to examine the genitalia from beneath; the shape of valva can be easily recognised. Females are more difficult, but they can be distinguished in this way as well; hereby the shape of the terminal edge of 8th segment is an useful characteristic.